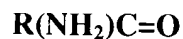


## CLAIMS

We claim:

- 5        1. A composition that allows a probe and target to hybridize at a temperature lower than their standard hybridization temperature, comprising a chemical component of the formula:

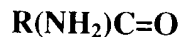


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where R is an amino or alkyl group.

- 15        2. A composition as recited in claim 1, wherein said probe is a biopolymer from 10 to 80 nucleotides long.
3. A composition as recited in claim 1, wherein said target is a biopolymer from 10 to 80 nucleotides long.
- 20        4. A composition as recited in claim 1, wherein said probe is fixed on a surface.
5. A composition as recited in claim 1, wherein said target is fixed on a surface.
6. A method that allows a probe and target to hybridize at a temperature lower than their standard hybridization temperature, comprising:

25        (a) adding to the probe and target a chemical component of the formula:

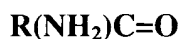


where R is an amino or an alkyl group;

(b) heating the probe and target in the presence of the added component;  
and

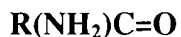
30        (c) allowing the probe and target to hybridize.

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7. A method as recited in claim 6, wherein said probe and target are heated to at least their standard hybridization temperature.
8. A method as recited in claim 6, wherein said chemical component is added to a solution.
9. A kit for hybridizing biopolymers at temperatures below their standard hybridization temperatures, comprising:
- 10 (a) a micro array;
- (b) a composition for use with said micro array; and
- (c) a target for detection.
10. A kit as recited in claim 9, further comprising a set of instructions.
- 15 11. A kit as recited in claim 9, wherein said composition to be added to said micro array contains a chemical component of the formula:



20 where R is an amino or alkyl group.

12. A composition that allows a probe on a micro array surface to hybridize to a target at a temperature lower than their standard hybridization temperature, comprising a chemical component of the formula:



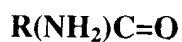
where R is an amino or alkyl group.

- 30 13. A composition as recited in claim 12, wherein said probe is a biopolymer from 10 to 80 nucleotides long.

14. A composition as recited in claim 12, wherein said target is a biopolymer from 10 to 80 nucleotides long.

15. A method that allows a probe on a micro array surface to hybridize to a target at a temperature lower than their standard hybridization temperature, comprising:

(a) adding to the probe and target a chemical component of the formula:



where R is an amino or an alkyl group;

(e) heating the probe and target in the presence of the added component;  
and

(f) allowing the probe and target to hybridize.

16. A method as recited in claim 15, wherein said probe and target are heated to at least their standard hybridization temperature.

17. A method as recited in claim 15, wherein said chemical component is added to a solution.